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THE CLAIM FOR "ABSOLUTE FREEDOM" FOR VIVISECTION

BY EDWARD BERDOE, M.R.C.S., L.R.C.P.E.

Two paragraphs recently published side by side in a London paper may serve aptly to illustrate the difference of the attitude in which a large and daily increasing number of thoughtful and intelligent persons assume towards the vexed question of Vivisection. One paragraph dealt with Dr. Doyen's experiment in Paris in transplanting a vein of a live sheep under complete anæsthesia to the leg of a man suffering from arterial aneurism, and thus restoring the circulation and curing the patient. The animal was put to no pain and was killed without any suffering whatever.

If we may legitimately kill animals for food, it could not be wrong to do what Dr. Doyen did. This is the argument used by Mr. Stephen Coleridge and those who agree with him in urging the British Legislature to make it compulsory to prevent all torture in laboratories wherein experiments upon living animals are performed. This is what we mean by legitimate vivisection. In another column of my journal there appeared an account of some experiments in the French navy on the effects of gun-fire at sea, when a number of dogs were confined in the cabin of a battleship which was bombarded to test the effects of the firing on the animals, which were, of course, not under the influence of any anæsthetic. At the conclusion of the experiments it was found that the dogs had been either burned to death, asphyxiated, or driven mad by terror. Those who oppose the torture of animals in the interests of science protest against such use of sentient creatures and, holding it to be immoral, they demand that it should be made illegal. The Vivisectors and those who support them reply that they must be absolved from the charge of cruelty

by the fact that their experiments are necessary for the advancement of medical science and the good of humanity. Considerable discussion has arisen about the meaning of the term "cruelty," and the Vivisectors repudiate indignantly its application to their work. Webster defines cruelty as "a disposition to give unnecessary pain or distress to others"; "an act which causes extreme suffering without good reason." The experimenters take their stand on this, and claim not only acquittal, but credit. They deny that they are disposed to inflict pain or are pleased at the suffering induced by their operations.

What they do in the interests of their science is "necessary," and although often severe it is held to be sanctified by its objects. The atrocities of the Congo rubber and ivory trade are defended by their perpetrators on the ground of the necessity of compelling the natives to collect a certain amount of rubber, ivory, etc., for the companies which employ them. Rubber is indispensable for a hundred purposes of our daily life; if the natives are indolent their task-masters say they must be compelled to work, and if they neglect to do so they must be punished. The shareholders in these African Companies must have their dividends, and the people must have their rubber, their ivory, and their tapioca. It is the same defence as that of the Vivisectors. "Necessity," said Sir Philip Sidney, "is the victorious rebel of all laws." William Pitt declared that "Necessity is the plea for every infringement of human freedom. It is the argument of tyrants, it is the creed of slaves." The plea of necessity has always been urged by the cruel. The men who have treated the natives of the Congo regions as Mr. Stackpoole has described in "The Pools of Silence," would have done all that the torturers in the Middle Ages did in the name of religion and the law, but what they did conscientiously the Belgian exploiters do for dividends and greed.

The civilized world is, for the most part, indifferent to the abominations of the Congo trade, and is naturally indifferent to the tortures inflicted upon animals in the laboratories of Europe and America. Their indifference in the former case is largely due to ignorance of the facts, in the latter it is due to the high esteem in which medical scientists are held and the difficulty of believing them capable of doing what the costermonger and the man in the street would be ashamed to do.

As the Vivisector works in secret and discourses piously in the

public press about the beneficence of his occupation and researches, he has no difficulty in obtaining a dispensation to do what he pleases, and he finds plenty of people to believe him when he denounces his opponents as slanderers and maligners of medical progress. The truth about Vivisection is much more readily ascertainable than the facts about the Congo trade. The rubber merchants do not boast of their doings even in their trade journals, but the Vivisectors record the details of their cruel work in professional books and papers. Dr. Crile's terrible experiments upon dogs are set forth in terms which any educated person can understand in his "Experimental Research into Surgical Shock," a well-known work to be found in any medical library. The story of Dr. Rose Bradford's experiments in gradually slicing away the kidneys of forty-nine living dogs which died in periods varying from six to thirty-six days may be found at length in the "Journal of Physiology" (Vol. XXIII., No. 6, 1899). The testimony of Dr. Klein, Medical Officer to the Local Government Board, London, was given to the First Royal Commission on Vivisection to the effect that he had "no regard at all" to the sufferings of the animals he used ("Minutes of Evidence Royal Commission," Q. O. 6,538 to 6,550). The prolonged sufferings inflicted upon dogs, a sheep and a rabbit by Sir T. Lauder Brunton, F.R.S., consequent on injecting digitaline, etc., into their veins is given at length in his work on "Circulation and Respiration" (London, 1906), pp. 103-129. "The Journal of Experimental Medicine," published for the Rockefeller Institute for Medical Research, and issued July 17, 1909, contains an article on "Meningitis," by Martha Wollstein, which consisted in inoculating into the spinal canal of monkeys the *Diplococcus* which causes experimentally cerebrospinal meningitis, the sufferings inflicted on the creatures by a method of injecting disease germs into their bodies, euphemistically termed "merely the prick of a needle," are set forth in detail, and every medical man knows what suffering is caused in the human subject by this terrible malady. We are often rebuked by our opponents for taking our examples of the cruelties of Vivisection from the works of Claude Bernard, Mantegazza, Majendie, Schiff, Paul Bert, Goltz, Chauveau and other foreign physiologists.

It is not strange that such outspoken accounts of the torture-

chambers of science as are to be found in the works of these experimenters should be very annoying to English-speaking scientists when translated for use in countries like America and England, where there is a greater detestation of cruelty to animals than exists in the Latin countries, but the crusade against scientific cruelty is prosecuted throughout the world, and it was such men as Majendie and his continental successors in the art of scientific cruelty who introduced it into our own schools of medicine and surgery. If our own experimenters are not so outspoken in their accounts of their researches, it can hardly be that our Vivisectors repudiate the practices of their colleagues, for their spokesman in England—Mr. Stephen Paget—holds up for admiration the name of Majendie to the Bishops and Deans who support his Research Defence Society, and the names of the other continental physiologists referred to above are held in the highest esteem by our English Experimenters. The civilized world is expected to exonerate them from the charge of inhumanity because Harvey vivisected nearly three hundred years ago in his researches on the circulation of the blood, because mosquitoes have been proved to be in some way associated with the transmission of malaria and yellow fever, and the treatment of diphtheria and tuberculosis has been improved—so it is maintained—in consequence of the researches that have led to the introduction of antitoxin and the tuberculin of Dr. Koch. On the strength of such examples we are asked to condone the torture of myriads of animal victims every year, which has resulted in nothing that could by any chance have advanced practical medicine or surgery. Dr. Jacob G. Schurman, President of Cornell University, in an article issued under the auspices of the Committee on Experimental Medicine of the Medical Society of the State of New York (1909), protests against all attempts to regulate experiments on animals—not to prevent them altogether, be it remarked—but to restrict them even in the very modified manner in which the English law interferes with them, and he demands absolute freedom for the investigator. He asks:

“How can he or you or I or any other person, except the investigator himself prescribe, and prescribe in advance, under what circumstances and conditions experiments upon animals are to be carried on? The investigator himself does not know where his research will take him, and few, if any, great discoveries have been made in science in response

to definite experiments deliberately undertaken for a particular end. Great discoveries in science have generally come by haphazard. 'The wind bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh and whither it goeth'—this is the way of scientific discovery. Of a hundred definite experiments for definite objects ninety-nine are failures. It is the happy inspiration of some favored moment under favorable conditions which gives birth to the great new discovery. And of all these favorable conditions and circumstances there is only one that is perfectly clear. This is absolute freedom for the investigator. Accordingly, the anti-vivisectionists' proposal to regulate the experiments of the scientist really means the paralysis of scientific investigation. The question, therefore, is, Shall scientific investigation enjoy the air of absolute freedom, in which alone it can live and flourish, or shall it be extinguished by the meddlesome interference of self-confident ignorance and sentimentalism?"

"Absolute freedom" for the Vivisector; let us realize what this implies. Paolo Mantegazza, Professor of Pathology at the University of Pavia, published some thirty-eight years ago a work on "The Physiology of Pain." The "Lancet," March 25, 1871, p. 415, in a review of this book, said:

"It will suffice to state that the experiments were intended to study the action of pain on digestion and nutrition. They were, as the professor himself confesses, agonizing to the animals subjected to them and distressing to the experimenters, and simply proved that loss of appetite, great weakness and a peculiar inhibition of moisture were the result of the pain inflicted. It is added that no alteration of the spinal marrow could be detected after the agony had been protracted for one month. Very meagre results of unpardonable cruelty."

The experiments on a number of guinea-pigs dealt with the problem how to create intense pain and at the same time to keep the creature motionless in an attitude which would not (like lying on its back) interfere with respiration. The ingenious Professor hit on two ways to accomplish this double purpose, "either by exasperating the pain so that its influence overcame the action of the muscles of motion, or by planting sharp and numerous nails through the soles of the feet in such a way as to render the animal nearly motionless, because in every movement it would have felt more acutely its torment" (p. 95). For the former purpose he caused a machine to be constructed, a drawing of which is inserted in the book. In the centre is a large cylindrical glass box or bottle, in which lies a rabbit. Through the cork descends and moves freely a handle terminating in iron pincers and claws—

so arranged that the presiding physiologist may grip at pleasure any part of the animal's body and lacerate or crush it at his discretion. "Thus," he says, "I can take an ear, a paw, or a piece of skin of the animal, and by turning the handle squeeze it beneath the teeth of the pincers; I can lift the animal by the suffering part, I can tear it or crush it in all sorts of ways." Figure 2 represents this "tormenter" isolated from the rest of the apparatus (p. 99). The breath of the animal passes through two tubes out of the bottle into suitable vessels. Then follow the details of twenty-eight experiments. Many of them, he says, occupied two days, all of them one day at least, the animals being put into the apparatus for an hour or two, then taken out to rest and put in again. The Professor prefaces what is to follow by this remark:

"These, my experiments, were conducted *with much delight and extreme patience* for the space of a year. (*Queste, mie esperienze, furono condotte con molto amore e pazienza moltissima per lo spazio di un anno*')."
—See "*Fisiologia del Dolore*," p. 101.

If we grant the Vivisector absolute freedom in his researches we must consent to the perpetration of atrocities of this kind. He considered them "necessary" for his studies on the action of pain, on digestion and nutrition. In his studies on burns and scalds made upon the dog, Dr. Wertheim, of Vienna, is reported in "The Edinburgh Medical Journal" (1868-9, p. 1,026), to have saturated the bodies of dogs with oil of turpentine five or ten times in quick succession, setting fire to it each time. Boiling water was used to scald animals nine times in quick succession. All the dogs died, either in a few hours or, at the latest, after five days. "Absolute freedom" in his researches on so important a subject as burns and scalds would warrant an experimenter in doing this if he considered it "necessary."

We are asked to leave the whole question of animal experimentation in the hands of the medical scientists. They say:

"Why should we not be willing to leave this matter with the scientific physicians? We entrust to them the lives of ourselves and of our children. And when, to devise means of preventing or alleviating our sufferings, they conduct experiments upon the lower animals, should we not extend to them the same confidence which we feel when we put our own lives in their hands?"

We reply that no profession, however honorable, learned, devoted and humane, can be trusted to act with the absolute freedom

demanding by the investigators of the laboratories. The history of religion in the past proves that the Christian Church was not always to be trusted with arbitrary and unlimited power over the bodies and souls of men, and in the Report of the English Royal Commission on Vivisection, 1876, on the necessity for legislative interference to protect animals from scientific cruelty, it is said that "It is not to be doubted that inhumanity may be found in persons of very high positions as physiologists. Sir Thomas Watson, Sir George Burrowes, Sir James Paget and many others have suggested the Analogy of the Anatomy Act (for legislation)." The Anatomy Act was passed in 1832 in consequence of the scandals connected with the great Anatomy School, at Edinburgh, at which Dr. Knox was a celebrated teacher. It was discovered that a murderer named Burke provided bodies for surgeons by killing his victims by suffocation, leaving no marks of violence. The crime was known as *Burking*, and to leave no temptation to such scandals as the robbery of graveyards and the murder of persons for the sake of the prices paid by surgeons for the bodies brought to the medical schools the wants of the doctors were provided for in a legal manner. I personally knew a most humane and benevolent old surgeon who told me that in his student days at one of our Great London Hospitals he had assisted in robbing a churchyard in Essex of a newly buried corpse for dissection at his medical school, when the scarcity of subjects for anatomical purposes was so great as to impede his studies. I could well understand the overmastering desire in an industrious student to secure material necessary to prepare him for his examinations when by legitimate means it was not to be obtained. Dr. Knox had great difficulty in supplying his students with bodies for dissection, and after the trial of Burke and his confederates the people of Edinburgh were so convinced of his negligence that they destroyed his house and library and he had to fly to the Metropolis, where he lived in obscurity and died in a by-street in East London.

If it was found necessary for the British Parliament to pass the Anatomy Act to abolish the practices of the Resurrection-men in 1832, and another Act to place some restrictions upon the Vivisectionists in 1876, it is evident that no Government can afford to give *carte-blanche* even to "scientific physicians whom we trust with the lives of ourselves and children." No responsible anti-

vivisectionists, so far as my long acquaintance with them enables me to speak with confidence, accuse medical scientists of culpable negligence towards their animal victims, nor do they suggest that they inflict pain wantonly, but when it is admitted that "there is a limited proportion of cases, which may be of great importance, where the results of experiment would be endangered by any means that could be taken against suffering, in these cases the animal must suffer" (see "Statement of Professors on behalf of Science"—"Boston Evening Transcript," February 25, 1896). In that case the humanitarians are right in their protest that the claim of the Vivisectors for "Absolute freedom for the investigator" cannot be conceded.

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